

ABSTRACT

In realizing an entire-screen simultaneous shutter function using a solid-state imaging device having a device structure as a CMOS solid-state imaging device, the restriction undergone by exposure time is relieved to secure a sufficient exposure time with swift operation. Separately from a transfer Tr for transferring a signal charge of a buried-type PD to an FD, a drain Tr is provided to exclude a signal charge of the buried PD. Both a channel potential on the drain transistor when turned on and a channel potential on the transfer transistor when turned on are set higher than a depleting potential for the PD. This makes it possible to completely transfer the signal charge of the PD by both the transfer Tr and the drain Tr. In the operation to sequentially read out a signal charge from the FD on a pixel-row basis, PD exposure operation is started in a course of reading out the same.